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Abstract of the Disclosure

5 A method and system for tracking attitude of a
device includes fixing a two-dimensional array of photo-
sensors to the device and using the array to form a
reference frame and a sample frame of images. The fields
of view of the sample and reference frames largely
overlap, so that there are common imaged features from
frame to frame. Sample frames are correlated with the
10 reference frame to detect differences in location of the
common features. Based upon detection of correlations of
features, an attitudinal signal indicative of pitch, yaw,
and/or roll is generated. In the preferred embodiment,
the attitudinal signal is used to manipulate a screen
15 cursor of a display system, such as a remote interactive
video system (RIVS). However, attitudinal tracking using
the invention may be employed in other applications. An-
other aspect of the invention is that the two-dimensional
array is configured to compensate for any curvilinear
20 distortions introduced by a lens system for imaging the
features within the field of view of the array.

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